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ABSTRACT

Retrospective Miscue Analysis (RMA) is an effective instructional procedure in which a group of readers listen to tape recordings of oral readings. A group member may stop the tape whenever a miscue is identified. The miscue is then analyzed by answering questions about the miscue. RMA can be easily adapted for use with microcomputers or for educational research by using unambiguous yes-no questions about each miscue. An RMA program for Apple computers has been developed and used with preservice teachers in a college setting to analyze the oral reading of children. The analysis was done out of class, which was beneficial because it kept the researcher's presence from interfering with the research, and it kept the activity from occupying class time. Other beneficial aspects of RMA on computer are that the questions presented on the screen can be varied according to the research needs (for example, strategic use of ambiguous questions can be employed), and that the order of questions can easily be varied. The benefits of RMA as a research tool are not the product of the analysis, but the process through which the subjects go in conducting the analysis. In contrast to the tests available, RMA provides data regarding the reader's awareness of reading behaviors and strategies used or not used during the reading process. To date, the value of computer use in RMA is unclear in either instruction or research. If RMA is to serve as a research tool of value, that value will be an extension of the work already completed or in studies which use RMA in a completely different manner. (References are appended). (SKC)

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Computer Applications and Research Utilization of Retrospective Miscue Analysis

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RMA FOR RESEARCH

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Computer Applications and Research Utilization
of Retrospective Miscue Analysis

Retrospective Miscue Analysis (RMA) is a procedure which based in miscue analysis (Goodman & Burke, 1972). It is a procedure which has the reader, and possibly a small group of other individuals, listen to a tape recording of the oral reading of a passage. Then any member of the group of listeners stops the tape whenever a miscue is identified. The miscue is then analyzed by answering a group of questions about the miscue. Like miscue analysis, RMA guides analysis of oral reading miscues through a predetermined set of questions. Unlike miscue analysis, RMA was originally designed to guide a reader to analyze his or her own reading behavior (Warsnop, 1980). Also unlike miscue analysis, the questions generally call for only yes or no responses.

RMA is a tool which has been developed with direct applications both in instruction and in research (Miller & Woodley, 1983). As an instructional tool, it has been reported as effective for helping readers to better understand the reading strategies available to them and to appreciate their own competence as readers (Warsnop, 1980; Miller & Woodley, 1983; Woodley & Oswald, 1985). While such reports are of potential interest to both the teacher and the researcher, the reader is

referred to the sources cited for further information regarding the instructional applications of RMA.

The purpose of this paper is to consider two overlapping areas relating to the use of RMA: RMA conducted with the aid of a microcomputer and the use of RMA as a research instrument.

One notable characteristic of RMA is the set of questions which is used to guide the analysis. An example of the questions which can often be found in the following questioning format, developed for using RMA as in instructional tool:

1. Does it sound like language?
2. Does it (the miscue) make sense?
3. Does it fit the passage?
4. Does it look like what is on the page?
5. Does it sound like what is on the page?
6. Did the reader correct it?
7. Should the reader have corrected it?
8. Why do you think the reader made the miscue?

(Woodley & Oswald 1985, p. 132)

Each of the first seven questions presented above calls for a direct yes or no response. The individual(s) conducting the analysis must decide whether each question is asking about the miscue itself or the context in which the miscue occurred. Once that decision has been reached, still other questions must be

answered. For example, what does it mean for something to "sound like language?" How can we tell if something sounds like language?

The last question calls upon the user to speculate regarding the cause of the miscue. That is, the last question calls upon the user to apply knowledge of the reading process in explaining the cause of the miscue. This question places the user in the position of trying to understand what happens as we read and why miscues are produced. The responses to this question will depend on the background and purposes of the user in conducting the analysis.

Woodley (1985a) has identified the ambiguity of the RMA questions as a major factor in the effectiveness of RMA as an instructional tool, particularly in teacher education programs. Instructionally, such ambiguity causes the user of RMA to clarify and refine beliefs held about reading while working to answer such questions.

This type of ambiguity is generally avoided in miscue analysis by virtue of the specific nature of the questions posed and the range of options available to the user when conducting an analysis.

Computer applications in RMA

One factor that has led to RMA being a potentially useful device both for instructional and for research has been the

development of an RMA computer programs run on microcomputers. Woodley (1985b) has presented a program listing for conducting RMA with an Apple microcomputer. He has also presented suggested procedures for completing RMA with a microcomputer. Woodley's program records each response given by the user. A printout is provided at regular intervals and a final printout provides a frequency distribution for the number of times each response was given as well as a percent summary for the occurrence of each response.

Woodley's work has been in large part with preservice teachers in a college setting. Students in his classes use the RMA computer program to analyze the oral reading of children in an effort to help the students develop a stronger notion of what happens while reading (Woodley, 1985a). This procedure eliminates the element of retrospection from the process and focuses on inspection of reading by persons other than the reader. The printout is used by Woodley as a report of the students' responses while completing RMA as well as providing insight into the knowledge or understanding of the reading process held by the users. Woodley insisted that students in his classes complete an RMA in small groups of no less than two and no more of five students outside of class time. He maintains that the use of small groups encourages students to discuss the meanings of the ambiguous questions and debate the merits of the answers they provide, resulting in greater understanding for the students of why they answered the

questions as they did. At the same time, the notion of reading held by the users is more completely thought out (Woodley, 1985a).

The use of the computer allows both teacher and researcher to be removed from guiding the process. This allows the teacher to utilize RMA as an instructional tool without necessarily taking up class time for the procedure or interfering with the answers the students provide. This also allows the researcher to use RMA with limited influence due to the researcher's presence.

The information provided in the printout could prove beneficial for both the teacher and the researcher. While Woodley's program and procedures were designed for use in an instructional setting, RMA conducted with the microcomputer can serve as an instrument which provides insight into the user's view of the reading process. The printout is a rich source of data for the researcher.

To date, the value of computer use in conducting RMA is unclear in either instruction or research. Yet the use of a computer for conducting RMA can have potential applications in both areas, as described above.

Research Utilizing RMA

Many measures of reading achievement, performance and development are available to researchers. Norm-referenced and

criterion-referenced tests are particularly well suited for many studies. A specific test or group of tests can be selected according to the research questions and procedures utilized for any given inquiry. The results of such tests are usually quantitative, providing numerical information concerning the area of reading examined.

Miscue analysis was originally developed as a taxonomy of questions which was used as a research instrument. As a research tool, miscue analysis has its major benefit in the results of the analysis which is conducted. However, the benefits of RMA as a research tool lie not in the product of the analysis but, rather, the process the subjects go through in conducting the analysis. In contrast to the tests available, RMA is a tool which provides data regarding the reader's awareness of reading behaviors and strategies which are used or not used during the reading process. Unlike the tests which are frequently used, RMA allows the researcher to gather qualitative information. However, as the tests must be selected and used according to certain criteria, so must the specifics of the RMA procedure be determined according to the questions and design for the research project.

While specific questioning strategies are built into RMA as an instructional strategy, the questioning procedures for RMA for research need to vary according to the research questions guiding the inquiry. RMA can be used to examine the process of reading or the process of analyzing reading, in which case the

questions presented above may well serve the research effort. If, however, the desire is to investigate either the product of the reading process or the product of the analysis, the questions may need to be more direct and have a strongly restricted set of possible interpretations. For example, rather than asking it the miscue sounds like language, the researcher may wish to ask instead if the miscue formed a sequence which was syntactically acceptable. Such rewording of the question would be likely to restrict the range of interpretations which the users might formulate in answering the question.

Another modification of the procedure might lie in the order or frequency with which the questions are asked. As an example, Wasnop (1980) has suggested that questions concerning the graphic or sound should be asked only if the questions for sounding like language, making sense and meaning the same as what was in the passage are all answered no. This is done to emphasize to the learner that reading is a process which focuses on meaning, not on looking like or sounding like what is on the page. That suggestion was for RMA as an instructional instrument. However, a researcher might choose to ask all the questions, depending on the problem being researched.

It is also important to note that the ambiguity of the RMA questions can serve to the advantage or disadvantage of the researcher, depending on the research questions and procedures guiding the research. Ambiguous questions provide evidence from

the subjects of what they believe reading is and how it functions through their interpretations, responses and reactions to the questions. In that way the ambiguity can serve as a rich source of data. However, the researcher be interested only in the frequency of occurrence of particular phenomena in reading. In that case, the ambiguity of the questions may well serve to the disadvantage of the researcher.

Weatherill (1982) has suggested that RMA can be used a research tool for investigating a reader's view of the reading process. As Weatherill states, RMA offers a unique opportunity for the study of the understandings that readers hold of the reading process. RMA has been used only rarely as a research tool. At present, RMA as a research instrument has been used only in doctoral dissertations.

Coles (1981) utilized a form of RMA to investigate student's understandings of their own reading strategies. Coles used RMA as one of six devices to collect data. In his study, Coles studied six seventh grade students by utilizing texts taken from social studies, science and English. He used miscue analysis as a mean of determining the reading strategies used by the readers as contrasted with the RMA, which examined how much the subjects were aware of the strategies they used. Coles reported that his subjects had views of reading which varied between settings and among reading materials used. The subjects were aware of their own reading strategies, but used those strategies differently depending on how they related to the

subject from which the text was drawn and their purposes for reading. For example, Coles reported subjects treated reading out of school much differently than reading in school. The strategies they used and the way they approached the task were quite different, depending on whether the task was school related or not.

Raisner (1977) utilized retrospective analysis of reading to explore the strategies of fourteen non-proficient adult readers who were enrolled in college at the time of her study. Raisner used reading passages several academic areas as reading samples which her subjects read aloud. Through RMA, Raisner discovered that her subjects relied heavily on the graphic information in the text almost to the total exclusion of contextual cues. Raisner concluded that her subjects were basically unaware of, and therefore basically unskilled in, the use of contextual cues in reading.

Studies such as these demonstrate how RMA can serve as a useful tool in conducting research which investigates reader's knowledge of reading behaviors and strategies during reading. Based on the review presented here, it is clear that if RMA is to serve as a research tool of value, that value will be an extension of the work already completed or in studies which use RMA in a completely different manner. If RMA is to be a research tool of value, then that value will be explored further as more studies using RMA are completed.

REFERENCES

Coles, R.E. (1981). The reading strategies of selected junior high students in the content area. Unpublished doctoral dissertation, University of Arizona.

Goodman Y.E. & Burke, C.L. (1972). Reading miscue inventory: Manual for diagnosis and evaluation. New York: Macmillan.

Miller, L.D. & Woodley, J.W. (Spring, 1983). Retrospective miscue analysis: Procedures for research and instruction. Research on Reading in Secondary Schools: A Semi-Annual Report, 10-11, 53-67.

Raisner, B. (1977). Reading strategies of non-proficient adult college readers, unpublished doctoral dissertation, Hofstra University.

Warsnop, C.M. (1980). A procedure for remedial reading instruction based upon miscue analysis research and techniques. Unpublished master's thesis, Queen's University, Kingston, Ontario.

Weatherill, D.W. (1982). Retrospective miscue analysis, unpublished paper, University of Arizona.

Woodley, J.W. (1985a). Microcomputers as a tool for teacher training in reading: One professor's approach. Proceedings of the National Reading and Language Arts Educators Conference, 1985, 73-84.

Woodley, J.W. (1985b). Retrospective miscue analysis aided by a microcomputer: A description and program listing. Research on Reading in Secondary Schools: A Semi-Annual Report, 14-15, 63-74.

Woodley, J.W. & Oswald, M.A. (1985). Retrospective miscue analysis: an instructional technique. Research on Reading in Secondary Schools: A Semi-Annual Report, 14-15, 127-138.